SPRING CLASSES
PAGE 4

STUDENT ART
PAGE 9

CLUB DATES & TIMES
PAGE 8

UAA Mat-Su Home of the Mat-Su College Arctic Dragons

Mat-Su Monitor

DECEMBER 2023 FREE VOLUME 47 NUMBER 2

DEC 13,20 JAN 4-26 matsu.alaska.edu

NEW Vet -Tech program!

Mat-Su College has exciting news! We are launching Alaska's first veterinary technology program! Veterinary technicians are the nurses of the animal world, but they do so much more than perform nursing care. They carry out imaging procedures such as radiographs and ultrasound. They take diagnostic samples such as blood and urine and perform lab tests on them. Veterinary technicians act as nurse anesthetists, dental hygienists, pharmacy technicians, and more.

Mat-Su College's Veterinary Technician Program will lead to an Associate of Applied Science degree. Keep on the lookout for more information on our webpage as we roll out more program information and the application for admission to the major later this fall. We plan to seat our first group of 16 students in the fall of 2024.

Veterinary Technology Information Session

WHERE: Snodgrass Hall - Room 118

DATE: January 10th

TIME: 6pm - 7:30pm

Refreshments will be available

Dr. Montalbano will be discussing the Vet Tech program and there will be an opportunity for Q&A. *This is open to the public.*

INDEX

What's New 2
Student Government.....3
Rocket Science.....3
Spring Classes 4
Community Events.....5
Around Campus.....6
From the Students.....7
Club Corner 8
Student Art 9
Puzzles.....10

Mat-Su College Director: Dr Marie Gardner

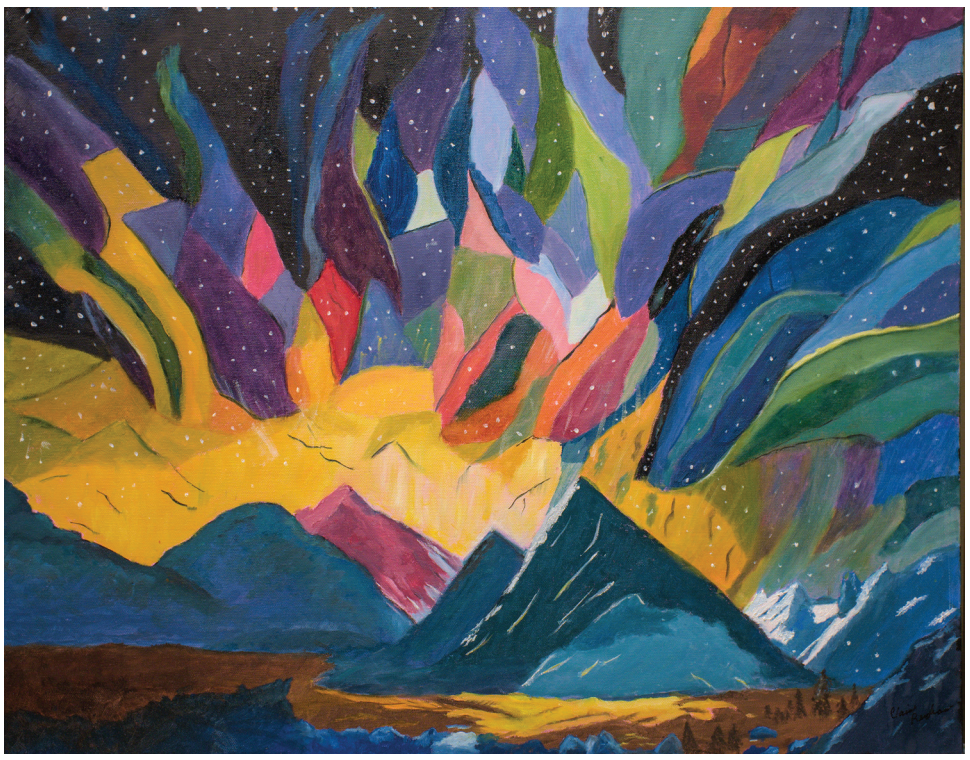
By Lynna Radavich-Williams

A few weeks ago I had the pleasure of interviewing Dr. Gardner, our new director. I asked her six questions. The first was why Alaska?

She responded by explaining her first trip to Alaska was in 2011 to meet family. From there it led her to fall in love with the beauty of Alaska. She eagerly made long range plans of retiring out of her previous education system and settling up here. She visited again in 2019 and 2021.

The next question I asked was for her to give a day in her life, to get a better understanding of what a director does. Dr. Gardner told me it was day four of her third week of being in office. As such, she said she was still learning and a big part of her day is spent studying. She has a heart to help, and in order to do so she wants to understand as much as possible to give the most knowledgeable decision and advice. Another thing is that she often has meetings, primarily with the other administrators. She said, "you put out a lot of fires, things

See **GARDNER** *page 11*



Elaine Renfrow, ART A212, *Alaska's finest:Abstract of the Northern Lights,* Oil on canvas.

Follow us online at https://linksta.cc/@monitor

Upcoming events:

December 11-14: Therapy dogs in FSM lobby, 10-3.

December 21: Grades available in UAOnline.

December 23 - January 2: No classes, campus closed.

January 15: No classes, campus closed.

January 16: Classes begin.

January 16: Registration begins for senior citizens using tuition waivers.

January 26: Add/drop deadline.

February 3: Financial Aid Fair. 10am - 3pm FSM lobby. Fill out your FAFSA and talk about scholarships.

February 5: Summer 2024 schedule available in UAOnline.

March 11-15: Spring Break. No class days.

March 15: Campus closed.

March 25: Fall 2024 schedule available in UAOnline.

CLUBS ETC...

Club meeting times subject to change in Spring 2024.

Arctic Dragon Veterinary Exploration Team (ADVET): Wednesdays

Bible Club: Wednesdays, 8:30-10:00 AM in Cafe.

Gaming Club: Monday 1-3 JKB 108.

Gay Straight Alliance: Wednesdays, 11:30 AM-12:30 PM FSM 204.

JEDI: TBD.

Mat-Su Monitor: Wednesdays, 12:15-1:15 JKB 108.

Math: Mondays, 3:00-6:00 PM in SNOD 103.

Nihango Tadoku Club: Thursdays, 1:30-2:15 PM in Library 213.

Robotics Club: Tuesday and Thursday, 11:00 AM - 3:00 PM in JKB 120.

Student Government: Thursdays, 4:15-5:15 PM in FSM 106.

Tabletop Gaming Club: Wednesday 12-3:30 in JKB 128.

Fall Finals Week is Dec. 11-16, 2023

Top 4 Tips for Finals Week:

1. Review what your instructor says on your class Blackboard site for details about the exam and what materials you can have access to during it.

2. When you get your exam, before you start…read the instructions.

3. Plan to arrive at your exam room a few minutes early. Driving in a rush and racing to the room will just stress you out.

4. Yes, you are busy, but try to get a good night's sleep and eat something before you test. Your body and mind will just plain work better.

Finals Schedule

You can find the MSC Finals Schedule online at https://www.uaa.alaska.edu/students/finals/

Library Extended Hours

Beginning Monday 12/4 through Saturday, 12/16, hours at the campus library will be:

- Monday-Thursday 8 am to 9 pm
- Friday 9 pm to 6 pm
- Saturday 9 am to 4 pm

Tutoring

Tutoring for Math and Reading/Writing is available in Room JKB107. They are there for you. See the Tutors' schedules on the Learning Resource Center website.

MAT-SU MONITOR STAFF

Editors
Emily Beiler
Lynna Radavich-Williams
Brook Wright

Feature Writers
Emily Beiler
Justice Darby
Amber Godin
Greg Jean
Ryan Newman

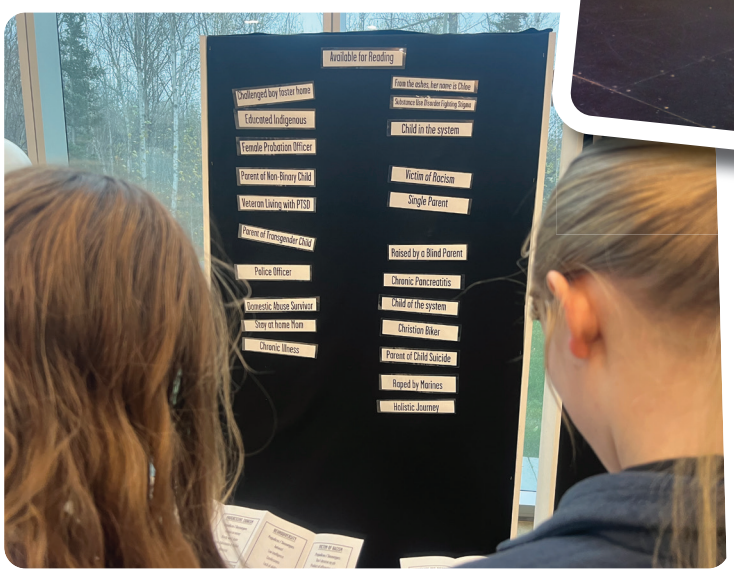
Photographer
Vacant

Advisors
Audrey Badger
Micah Muer

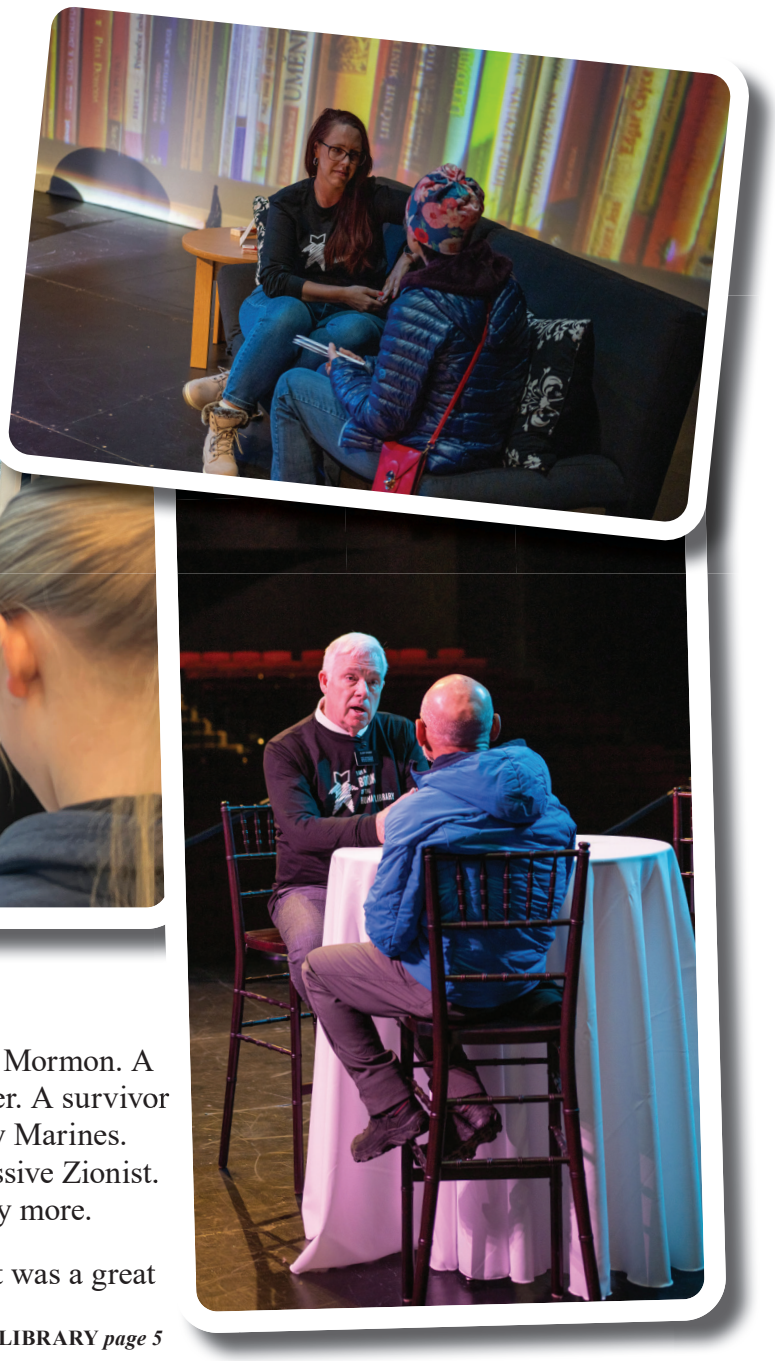
A Human Library comes to the Glenn Massay

By Hollis Novak

On October 5, the Glenn Massay Theater hosted a Human Library event. Volunteers with interesting life stories served as "books" to be checked out. Instead of reading them, attendees talked at length with their "book."



Guests checking out the list of "books".



The event organizer's goal was to connect people who might not normally talk to one another. It succeeded at that. The volunteers -- the "books" -- came from diverse backgrounds. Many had difficult life stories or viewpoints they felt were unusual. There was a chronic pancreatitis survivor.

A former Mormon. A sex worker. A survivor of rape by Marines. A progressive Zionist. And many more.

The event was a great

See **LIBRARY** *page 5*

Disclaimer

The Mat-Su Monitor is the student newspaper of Mat-Su College. The Monitor aims to report college news and serve as a forum for student writing. The Monitor seeks submissions of news, editorials, and short fiction from all students, staff, and faculty of Mat-Su College. All students are invited to attend the Monitor's weekly meetings. Details on participating in or submitting content to the Monitor can be found at https://matsu.alaska.edu/monitor

The Mat-Su Monitor is funded by the Mat-Su College Student Government Association and our advertisers. For information on advertising in the Monitor contact Micah Muer at mwmuer@alaska.edu or 907-745-9758.

The opinions expressed the Monitor article are solely those of its authors. They do not necessarily reflect the opinions or policy of the college, its students and employees, or the wider University of Alaska system.

Submissions policy

Students are invited to submit articles and letters to the editor to matsu.monitor@alaska.edu or at https://matsu.alaska.edu/monitor. The Mat-Su Monitor will not accept anonymous submissions, though with prior arrangement articles of a sensitive nature can appear anonymously. All submissions are subject to editing and will only appear with the approval of the editor.

CALL TODAY!

MEET WITH AN
ACADEMIC ADVISOR
907-745-9762
Spring Semester Starts January 16th

Mat-Su College
University of Alaska Anchorage

OPPORTUNITIES START HERE!

WALK IN WEDNESDAY

December 6,13, and 20th

Mat-Su College
University of Alaska Anchorage

- Same Day Academic Advising
- Same Day Financial Aid Advising

Business owners!

The Mat-Su Monitor is a great place to advertise your business or event. The Monitor has a wide circulation, with thousands of copies inserted in the Frontiersman and distributed throughout the Valley. We also have low rates:

Ad Size	Cost
3" by 3"	$75
5" by 5"	$125
7" by 7"	$175
Full page	$300
Full page, back	$375

Moreover, the Monitor runs relatively few ads, which ensures that your ad will stand out. Finally, advertising in the Monitor demonstrates your support for local students. For more on advertising, call 745-9758.

Meet Senator Lynna Radavich-Williams

Degree: Marine Biology (Bachelors in Science)

Fall is my favorite season. I love baking, crocheting, hiking, and reading. I've lived in Alaska for almost eighteen years and have loved every year of it. In the summer you can find me gardening or just enjoying the sunshine with a book. I've worked as a vet assistant for almost three years at North Star Animal Hospital. I have a deep love for animals, especially ocean creatures.

I joined student government because I love helping people whether it be the small or big tasks. That's what I hope to accomplish in my role as a senator.

MONITOR META by Greg Jean

i was supposed to have a comic last month
it was a pretty good joke about procrastination
and then i procrastinated and missed my deadline
it got really meta

MAKE A POSITIVE IMPACT IN YOUR COMMUNITY

Play an important role on the Mat-Su College Campus. Being on a committee can help to enhance your career, give you a chance to give back to your community, and give you the opportunity to challenge yourself by helping to shape your society.

Join a Mat-Su College Student Government Council Committee

Or join one of the student clubs.

Clubs are a great place to meet like minded people, have fun, learn new things and relax.

Bible Club	Gaming Club
Robotics Club	JEDI Club
Math Club	Mat-Su Monitor
Gay Straight Alliance	Veterinary Club

Joining a committee or club looks good on resumes as well as gives you a chance to connect with fellow students, staff and faculty. You owe it to yourself to try them out. If you don't see a club that interests you, can start one of your own. Student Government will fund you up to $300 to cover expenses. You can pick up a form at the Student Government office in JKB 114, near the café.

3" x 3" $125 color
5" x 5" $175 color
7" x 7" $225 color
Full Page $300

Advertisers Sought!
Advertising in the Mat-Su Monitor is an affordable way to reach a wide demographic. With a circulation of around 5,000, an educated readership, and affordable rates. For details contact mwmuer@alaska.edu or 907-745-9758.

Rocket Science: The Basics in Layman's Terms

By Justice A. Darby

Introduction

Despite its reputation for being complex and difficult to understand, rocket science, when broken down into Layman's terms, is actually not too difficult to understand. For the average person who has at least taken a high school chemistry and physics class, these principles presented should not take too much effort to make sense of. For anyone else at least interested in the sciences, even the Layman's terms shouldn't be too hard to understand. What will be presented will be the boiled down essentials to how a rocket works.

The de Laval Nozzle

Rocket engine nozzles are designed in a very specific way that allows for the combusted propellants to be used to obtain maximum effectiveness. These nozzles are called de Laval nozzles or converging-diverging (CD) nozzles. These nozzles basically take a duct in the shape of a cylinder and constrict one section of it to a minimized cross-sectional area before expanding it back up again. What this does is it allows for the constricting of a rocket's mass flow rate to a constant value by minimizing the area in which combusted propellants can escape. This area is the nozzle's throat. At the nozzle throat, the propellants are squeezed together to a minimum area tightly where the maximum effective velocity it can achieve is the propellant's speed of sound where the nozzle Mach number is 1.

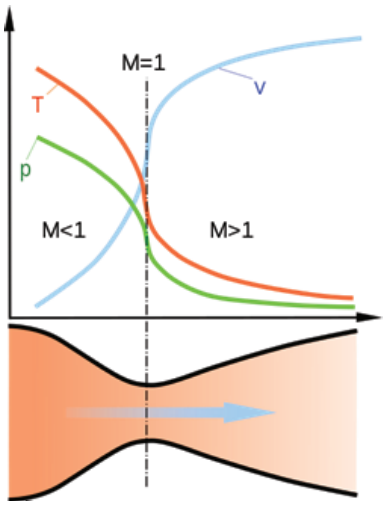


Fig. 1: A diagram of a de Laval Nozzle

After the propellants leave the nozzle throat, the gasses then begin to speed up. The gasses, as they travel through the nozzle and away from the nozzle throat, exchange the heat energy it gained from combustion and convert into kinetic energy, the energy of movement. This results in the exhaust gasses losing temperature and pressure as it travels through the nozzle, but in exchange it gains more and more velocity.

A Rocket's Force of Thrust

As the exhaust gasses finally leave the nozzle, the resulting effect that the expansion of the gasses have on the rocket is the force of thrust produced. The thrust from a rocket engine comes from two sources: the exhaust speed and the exhaust pressure. The pressure of a gas ends up exerting a force on the nozzle through its expansion, and, while it travels through the nozzle, the mass of the exhaust being thrown out of the rocket acts exactly in the same way as if you were to throw an object off an office chair and felt a motion opposite of the throw.

Of course, there is one consideration in regards to the rocket when trying to maximize a rocket's performance: outside effects. The primary effect in consideration when it comes to a rocket's thrust is how the outside atmospheric pressure will affect the exhaust gasses as they exit the nozzle. For optimum and ideal performance, the rocket's exit pressure is best to have equal the outside atmospheric pressure. An exhaust flow where the atmospheric pressure is greater than the exhaust's exit pressure can result in the flow being compressed by the atmosphere, causing a reduced effect the pressure of the exhaust gasses will have on the rocket nozzle. If the exit pressure is greater than the atmospheric pressure, it means that more pressure from the gas could have been utilized on the rocket to give better performance.

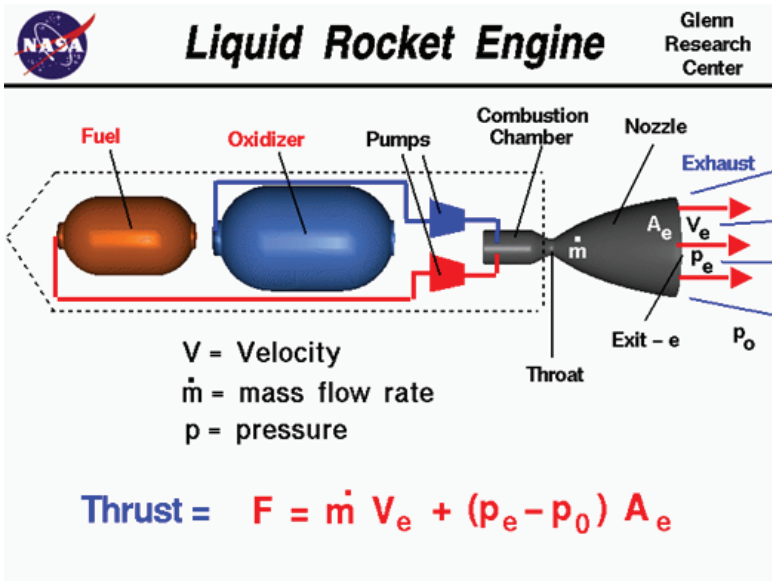


Fig. 2: The Force of Thrust from a Rocket

Of course, as many probably know, the atmosphere is not uniform in pressure with altitude as the pressure decreases the higher into the atmosphere one goes. To compromise, a rocket engine will tend to have its exhaust gasses exit at an exit pressure equal to an effective average pressure in which the engine travels through in the

See ROCKETS *page 11*

04 SPRING CLASSES

ACCOUNTING
- Principles Financial Accounting
- Principles of Managerial Accounting
- Workpaper Prep & Present

AGRICULTURE
- **Organic Gardening**

ANTHROPOLOGY
- *Alaska Native Cultures

ART
- *Art Appreciation
- *History of Western Art I
- Beginning Drawing
- Intermediate Drawing
- Beginning Painting
- Intermediate Painting
- Beginning Watercolor
- Introduction to Art Education
- Color Design

BUSINESS ADMINISTRATION
- *Business Foundations
- Business Law I
- Business Law II
- Computer Concepts in Business
- Entrepreneur & Small Bus Mgmt
- Fundamentals of Supervision
- Marketing Practices
- Personal Finance

BIOLOGY
- *Human Anatomy & Phys I & Lab
- *Human Anatomy & Phys II & Lab
- *Introductory Biology & Lab
- Intro Micro for Health Science

CHEMISTRY
- *General Chemistry I & Lab
- *General Chemistry II & Lab
- *Intro to General Chemistry
- *Intro to Organic/Biochemistry
- Chemistry Skills & Problem Solving

COMMUNICATION
- *Fund Oral Communication
- *Public Speaking

COMPUTER & ELECTRONIC TECHNOLOGY
- CCNA 2
- Comp User Support & Help Desk
- Customer Service Fundament
- Industry Net Directory Config
- Individual Technical Project
- Industry App Infrastructure
- Industry Workplace Experience
- Local Area Networks
- PC Operating Systems
- PC Technician Fundamentals
- Selected Topics in IT

COMPUTER INFORMATION & OFFICE SYSTEMS
- Spreadsheets I: MS Excel

ECONOMICS
- *Principles of Macroeconomics
- *Principles of Microeconomics

EMERGENCY SERVICES
- Emergency Medical Tech I
- Emergency Trauma Tech

ENGLISH
- Introduction to Creative Writing

GEOGRAPHY
- *Earth Systems

GEOLOGY
- *Planet Earth

HISTORY
- *East Asian Civilization I
- *History of United States
- *Western Civilization I
- *Western Civilization II

HUMAN SERVICES
- Conflict & Collaboration
- Human Services and Disabilities

INFO SYS & DECISION SCIENCES
- Computer Concepts in Business

JUSTICE
- *Intro to Criminal Justice

LANGUAGES
- *Elementary ASL II
- *Elementary Japanese II
- *Elementary Spanish I
- *Elementary Spanish II

LOGISTICS
- Logistics, Info Sys & Cust Service

MATHEMATICS & STATISTICS
- *Calculus I
- *Calculus II
- *Elementary Statistics
- Intermediate Algebra
- Ordinary Differential Equations

MEDICAL ASSISTING
- Medical Terminology
- Essentials of Human Disease
- Your Health & Social Services Career

MUSIC
- *Music Appreciation

PHILOSOPHY
- *Introduction to Philosophy

PHYSICS
- *College Physics I & Lab
- *College Physics II & Lab
- *General Physics II & Lab

POLITICAL SCIENCE
- *Intro to American Government
- *Intro to Political Science

PSYCHOLOGY
- *Introduction to Psychology
- *Lifespan Development

QUANTITATIVE SKILLS
- *College Algebra for Calculus
- *Trigonometry
- Essential Mathematics

REFRIGERATION & HEATING
- HVAC/R Control Systems
- HVAC/R Distribution System
- HVAC/R Troubleshooting
- Refrigeration & AC II

SOCIOLOGY
- *Introduction to Sociology

VETERINARY ASSISTING
- Handling & Behavior: Lg Animals
- Intro to Veterinary Profession
- Introduction to Large Animals
- Vet Anatomy & Physiology
- Veterinary Assistant Practicum
- Veterinary Office Procedures

WRITING
- Accelerated Learning Program
- *Writing & the Professions
- *Writing & the Sciences
- *Writing Across Contexts
- Intro to College Writing
- Intro to Grant Writing
- Writing & Reading Strategies

This list is subject to change. Visit matsu.alaska.edu and click "Course schedules" for the most current list of scheduled classes.

**Indicates class meets General Education requirements (GERs)*

Semester runs January 16 - May 4

From the Office of Financial Aid

- The UA Scholars deadline to apply for admissions is by May 1st of your senior year in high school to the UA campus of your choice. Apply for admissions at tinyurl.com/2p946nys.
- The Alaska Performance Scholarship (APS) and Alaska Education Grant (AEG) FAFSA 2024-2025 deadline is June 30, 2024. Complete the 2024-2025 FAFSA after December 31st, 2023 attinyurl.com/2j69h9ry.
- The 2024-25 FAFSA application opens on December 31st, 2023, (this is different than usual. Complete the 2024-2025 FAFSA after December 31st, 2023 at tinyurl.com/2j69h9ry.
- FAFSA will go back to the normal October 1st opening date in 2024), and covers Fall 2024 through Summer 2025. Be sure to complete the application as early as possible to ensure you receive the maximum amount of funding available to you!
- On October 1st, 2023, the University of Alaska Foundation Scholarship Application opened. The application covers all the university-based scholarships and will automatch you to anything you qualify for! The deadline for the application is February 15th, 2024. You can apply at tinyurl.com/2p8edhd9.

See *LIBRARY page 2*

success, at least according to the attendees we spoke to. For example, one participant said he had lived for many years in rural Idaho. His kids were the only non-Mormons in the area. Talking to the ex-Mormon really helped him understand that culture. Other participants made similar remarks.

To find upcoming Human Library events or learn more, see https://humanlibrary.org/

To find upcoming Glenn Massay Theater events, see https://glennmassaytheater.com/

Mat-Su College
University of Alaska Anchorage

FUND YOUR FUTURE!!

FINANCIAL AID RESOURCE FAIR!

February 3rd, 2024

10:00am - 3:00pm

Mat-Su College
8295 E. College Drive
Palmer, AK 99645

For more information:
@ abadger@alaska.edu
@ dmhaddeland@alaska.edu
(907) 745-9746

Free Entry
no registration required

Meet Scholarship Representatives & Learn about Scholarships!

Get help with your FAFSA in real time!

UA is an affirmative action/equal opportunity employer, educational institution and provider and prohibits illegal discrimination against any individual: www.alaska.edu/nondiscrimination

Christmas Friendship Dinner

By Elizabeth Dennis

The Christmas season is drawing near and that means the Christmas Friendship Dinner volunteers are gearing up to provide the Mat-Su Valley a free Christmas meal at the Menard Sports Center on Christmas Day from 11am to 3pm that is packed with good food, friendly volunteers, gifts, entertainment and of course Mr. and Mrs. Santa Claus. We are hosting a Tree Decorating Contest Dec 23rd with prizes for Best of Show, Creativity and People's Choice. Come and join us! Call 907-631-9776 or visit us at christmasfriendshipdinner.com to see how you can get involved today!

This Photo by Unknown Author is licensed under CC BY-NC-ND

This Photo by Unknown Author is licensed under CC BY-NC-ND

MSMCS

MAT-SU MIDDLE COLLEGE
NOW ACCEPTING APPLICATIONS

GRADUATE HIGH SCHOOL WITH UP TO 60 CREDITS!

Priority application period: January 4TH - March 5TH

Family Information Night Webinar posted at https://www.matsuk12.us/domain/6968
Go to matsuk12.us/msm for more information!

MATANUSKA-SUSITNA BOROUGH SCHOOL DISTRICT
or 907.761.3495
907.761.3498
MSM@matsuk12.us
www.matsuk12.us/msm

If you or someone you know is homeless or at risk of being homeless, we can help!

We serve clients age 14-25 from 8am to 5:30pm Monday-Friday and 10am to 3:30pm Saturday. We provide all of the following services:

Food
Clothing
Hot Showers
Laundry
Stable Housing
Treatment Referrals
Education Fulfillment
Job Training
Opioid Overdose Kits

Call Us:
Main Office: (907)373-4357
24 Hour Outreach: (907)354-4357
Visit Us:
300 N. Willow St.
Wasilla, AK

REDEMPTION
LOVED AND THRIVING

Nine Star Education & Employment Services
Developing Alaska's Workforce

MY HOUSE
PODCAST NETWORK

STEAM DRIVEN
BOUTIQUE

Gathering Grounds
CAFE

MY House

You are always welcome here!

When you need a hand...

By Joe Squirrel

As the nights get longer and colder, know that you're not alone. The college has people to help you get home safely.

Since spring semester, Mat-Su College has had a University Police Department (UPD) officer on campus. Officers are here for more than physical safety. In addition to walking you to your car, they can help jump your battery or unlock your doors. To get a hold of an officer, contact UPD dispatch at 907-786-1120.

If a UPD officer isn't on campus, Physical Plant (i.e., maintenance) staff can help. They, too, can walk you to your car, jump your battery, or unlock your doors. They will even walk you out to your car if you have any reason for concern. You can reach Physical Plant by calling 907-745-9789.

Finally, you can always call Student Services between 9 AM and 5 PM for help. They may have to transfer you to another department, but they will always make sure somebody's solving your issue.

Winter Driving Reminder

With snow returning to campus, it is a good time to remind everyone to give yourself extra time for your campus commute. Classes won't wait for you to arrive.

While driving on campus, please follow all posted signs and be sure to park in areas that have already been plowed. Also, if parking along a sidewalk, be sure not to have any part of your vehicle hanging over the sidewalk so crews can clear the snow.

A Letter Never Wrote

By the Unwriter

I lost everything the day that
you died,
By no fault of your own
I lost the old me
Everything, every hope and
dream.

I lost all my family and friends
Once they realized that I
would not be
The me that they used to see
Once they realized that time
would not mend
They decided our relations
should come to an end.

But what did I expect?

They didn't see you die slowly
day by day.
They didn't see you fade
away.
They didn't grasp onto you
tight,
Knowing every visit could be
the last sight.
They didn't feel the weight of
the world,
As every wish and hope was
at you hurled.

They didn't listen to you gasp,
Day after day, wishing each
breath your last.
They didn't watch as you
finally died.

But neither did I,
Because I exchanged it all for
McDonald's french fries.

And while it no fault of your
own,
And while through it all I have
grown
I can't help but wish for all of
it back,
And one more minute,
and one more last "I love you
too"

Cry

By Brook Wright

It's been so long since I
heard your voice.
I loved listening to you
sing
I can't remember what you
SOUND LIKE.
You were a symphony
If these tears don't leave
my throat
And now the silence mocks
me
I might forget what I sound
like.
All I hear in my own tears
Crashing to the floor.

I'm Back

By Sandra Laine

That ghastly hue
That shines upon you
For some reason, went well
with your skin

And the ghastly light
That hindered my flight
Made you feel ever so
warm

Through darkest nights
And coldest of storms
I flee to its comforting
embrace

But no matter the hue;
That shines from you
Like a moth to a flame
I'm back again and again

Your Funeral March

By ABC

One by One the days march by
Each at end, a woeful sigh
Each a symptom of the night
Each's end- without sight

The dreaded day ever near
Each days passing full of fear
For the day they attend to
The never ending rhythm,
Playing for you.

Campus lost and found now housed at the library
Missing your ...

- **Keys?**
- **Phone?**
- **Jacket?**
- **Headphones?**
- **Flash drive?**
- **Other item?**

Just ask at the library desk -- your item might have been found!

Find Jobs and Internships on
HANDSHAKE

3 EASY STEPS TO GET STARTED

Sign Into Your Profile
Sign into you profile using your UA credentials at alaska.joinhandshake.com

Update Your Profile Information
Upload your resume and change necessary information such as your graduation date, major, etc.

Stay on Track
Check back daily for new listings, events, and favorite jobs to never miss a deadline. Download the app and keep up with the latest opportunities.

Handshake Mat-Su College University of Alaska Anchorage

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: www.alaska.edu/nondiscrimination.

A small glimpse into the average life of Emily Beiler:

Fast-Food with Ease

By Emily Beiler

It is a well-known fact that fast-food drive-thrus were intended to speed up the process of ordering one's food, purchasing the exact items requested, and continuing on one's way in a convenient manner. It is a lesser-known fact that the Al Beiler family seems to unfailingly cast dark shadows on the reputation of the wonders of drive-thrus.

On a certain day in August, such an event was no exception. The four Beilers had been happily traversing along the highway and upon entering a town, observed a sign advertising Arby's. Since they were hungry, it was decided they should simply "go through the drive-in," against the better judgment of their quiet conscience. It is possible their empty stomachs affected their ability to reason, therefore hindering any remembrance of past experiences. That was the first dreadful mistake. They say it is hard to teach an old dog new tricks, and I might add that the older the dog, the fewer tricks it possesses. That is to say, the father of the Beiler clan seemed to never quite grasp the trick of the immaculate process involved with drive-thrus.

As they entered the parking lot, they pulled behind a few other vehicles in line to order their meals. While waiting, Verna (who never seems to sit still) hopped out of her seat and went to the cooler stashed in the trunk, hoping to find a few items of food along the healthier line to add. It only took a moment for the folks ahead to complete their order, so Al (who never seems to enjoy waiting), upon concluding that Verna was securely hanging on to the vehicle, drove to the ordering station. Hardly had the employee on the speaker box given a friendly "Hello", then Al began spewing off his order. It should be noted here that the rest of the family members had not yet decided on their selections, except Emily, who by this time had already succumbed to the memories of past experiences in similar situations and had given up hope that this event was any different. She slouched further down in her seat, saying, "Just get me anything, I don't care." Perhaps visions of faulty McDonald's orders brought her painful flashbacks, resulting in her confident resignation to disaster. Also seated in the middle was Hans, who by this time had told Al he wanted a chicken sandwich with fries and a soda, number six. Al promptly turned to the speaker and said, "Number six, only the sandwich." Hans exclaimed in dismay, rolling his eyes at Emily, who rather seemed to enjoy the spectacle. Meanwhile, Verna reappeared with an assortment of lettuce, oranges, and carrots to share. Unfortunately, she had failed to previously scan the menu board and make her selection. While deciding, Al and Hans were engaged in trying to sort out what exactly Hans wanted.

"All I want is a number six!"

"OK," Al turned to the speaker box, "make that number six a whole meal."

"Hans, sodas are so expensive!" This from Verna.

"Fine, just a burger."

Al shouted back at the speaker. The employee answered, "So another chicken sandwich but no meal?"

Emily and Hans both gave exasperated sighs.

"No…" Al corrected it, adding Verna's order, who by this time had decided.

Verna turned to Hans, "You don't need fries, do you?"

After several more utterly confounding minutes, the Beilers decided it was the best they could do for the time being and pulled to the pick-up window, where Al continued to make changes to the order. Verna muttered under her breath, "Al, that just confuses them all the more!"

By some miracle, the food arrived with little delay and all the orders seemed to be intact. How that happened will remain a mystery forever. Hans had his meal, although a few fries seemed to jump into Verna's hand en route to the back seat. A roast beef sandwich was handed to Emily, who was deeply engrossed in her book, much too busy to notice any food from a fast-food drive-thru.

One last bit of drama was produced as soon as they again hit the road – it seemed Verna had left the trunk open in her search for healthy food. However, nothing was lost or damaged and they continued on once more.

This event definitely shows some improvement over previous attempts, much to the astonishment of them all. Perhaps the Beilers are getting the hang of this after all!

Ode to Old Friends

By Dido M. Walker

Try as I might
To rid you of my life
You appear at every window and door.

And when the sun shines in,
To pardon your sin,
Your shadow darkens its path.

Every minute I rid you
An hour bids adieu;
To the hope of a day of life.
There's not one second, nor minute,
That the burden of your strife,
Does not live in it.

Hungry

By Brook Wright

I am so hungry
I will make a ham sandwich
So tasty, yummy

Running Running

Running, running,
From Stingy Jack,
Running, running,
From the man in black
Running, running,
From the man with the lantern,
Running, running,
From the Jack O'Lantern
Running, running,
He'll take your head
Running, running,
You'll join the dead.

Stargazing

By Brook Wright

For eons
mankind has looked
to the heavens
in search of navigation and direction
And yet, when I
gaze upon the stars
in your eyes,
I am lost

HEALTHCARE WORKERS ARE IN DEMAND!
Many jobs require training but not a degree.
Mat-Su Health Foundation vocational scholarships can help!

MAT-SU HEALTH FOUNDATION
Apply today at healthymatsu.org

A Look at the Nation

By Lou O'Hare

Folks, this is Lou O'Hare with another look at the nation. In 2023, we saw a historic joining of forces as the Writers Guild of America (WGA) and Screen Actors Guild-American Federation of Television and Radio Artists (SAG-AFTRA) unions went on strike together to fight for better pay and working conditions for their members. Given that both unions represent the most famous people on the planet, this dual strike was one of the most visible union fights in the country, if not the world. So, with the world watching and the stage set, let us begin our story.

WGA struck from May 2, 2023 to September 27, 2023. This 148 day strike has been the longest from the union in decades, only beaten out by the 1988 strike that lasted a week longer. The inions were all fighting for better working conditions and pay for their members. SAG-AFTRA and the WGA particularly focused on preventing the use of AI to steal the work of their members. The studios fought back viciously and did their best to pressure or break the unions into a favorable deal for the studios.

According to a recent Deadline report, the Alliance of Motion Picture and Television Producers (AMPTP) is in the strike for the long haul—with a plan to let the Writers Guild of America (WGA) "bleed out" before resuming negotiations. "The endgame is to allow things to drag on until union members start losing their apartments and losing their houses," one source told the trade. Per Deadline, the AMPTP is willing to wait until it feels that the writers are cash-strapped and more willing to compromise on their demands. "The studios and the AMPTP believe that by October most writers will be running out of money after five months on the picket lines and no work," reads the Deadline report. "The studios and streamers feel they would be in a position to dictate most of the terms of any possible deal." An insider called the strategy "a cruel but necessary evil."

I think evil is the right word for the studio executives here. However, the unions stood strong and won their respective union contracts. It shows that despite what anti-labor agitators say, we can win a better world for each other and those who come behind us when we stand in solidarity. "It's certainly not perfect for anybody.... But I think we did get everything we needed and then some. And I think that is going to be the legacy of this negotiation," said SAG-AFTRA national executive director and chief negotiator Duncan Crabtree-Ireland.

So to wrap up, this all started because greedy executives were screwing over working-class people. So those people banded together, and when they did, they were told their calls for livable wages and basic job protections were ridiculous and that the higher-ups would never answer their demands. Then, the unions went on strike, and the greedy resolved to starve the people. But even that didn't work against mighty unions. And after months of fighting, the people and their unions won for themselves and future members. So next time you hear anti-union propaganda that tells you that unions don't work or that your boss is really your friend, don't forget who fought for whom and why. Solidarity Forever!

That's all from me, folks. This has been Lou O'Hare with another look at the nation. Safe travels.

Monitor

MEETING TIMES
Wednesdays
12:15 -1:15
JKB 108

Looking For

- Photographers
- Writers
- Reporters
- Marketing Reps
- Cartoonists
- Artists

Now taking submissions:
Next deadline for entries:
January26

TABLETOP GAMING CLUB

WHEN: Wednesdays

12:00 - 3:30

WHERE: JKB 128

Mat-Su College
University of Alaska Anchorage
読書は素晴らしい！
Reading is Fantastic!
想像力
思考力
言語力
日本語
多読クラブ
日本の本
MSC
Nihongo Tadoku Club
《Japanese Extensive Reading Club》
Four Golden Rules:
1. Start from scratch.
2. Don't use your dictionary.
3. Skip over difficult words, phrases, and passages.
4. When the going gets tough, quit the book and pick up another.
Meeting: 4:00 PM – 5:00 PM Friday in FSM 105 / ZOOM
Contact: Shunji Ninoyu at sninoyu@alaska.edu
for more information
UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: www.alaska.edu/nondiscrimination Exp. May 2023

GET INVOLVED WITH YOUR

MSC SGC

STUDENT GOVERNMENT
MEETINGS EVERY
THURSDAY
4:15 - 5:00
FSM 106

ADVET Club

The Arctic Dragon Veterinary Exploration Team is a club focused on exploring the many areas of the veterinary field, working to familiarize its members with what they could expect or what careers exist within. Not only is the club open to members of the Veterinary Assistant Certification program, but also to people outside of that program, whether it be other students or people in the community who are curious about the club's activities. We hold bi-weekly meetings with dates to be announced every month to shift around with the majority of schedules. We hope to see you at one of our meetings! If you have any questions, you can contact Dr. Montalbano at 907-745-9771 or email her at jemontalbano@alaska.edu.

Gaming Club

When: Mondays 1:00- 3:00

Where: JKB 108

GSA

Gay Straight Alliance

When: Wednesdays 11:30 - 12:30

Where: FSM 204

Mat-Su College / UAA Multicultural Student Services

JOIN THE JEDI ALLIANCE

The JEDI Alliance is a group of student leaders and advocates dedicated to advancing **Justice**, **Equity**, **Diversity**, and **Inclusion** at Mat-Su / UAA. Become an advocate!

Apply Now To Join

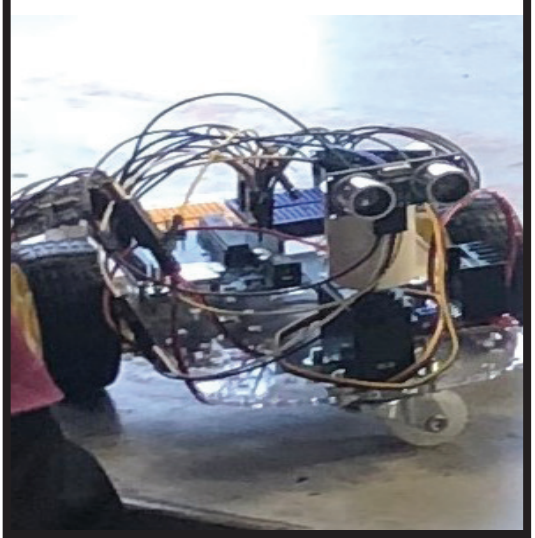
- Join a committee focused on awareness, outreach, and adventures!
- Advance belonging and inclusion at Mat-Su!
- Get involved and share your voice!
- Scholarships available!

Questions? Contact Dr. Jennifer Bernard at jdbernard@alaska.edu

Robotics Club

Tuesdays & Thursdays

10 AM to 3 PM JKB 120.



MATH CLUB

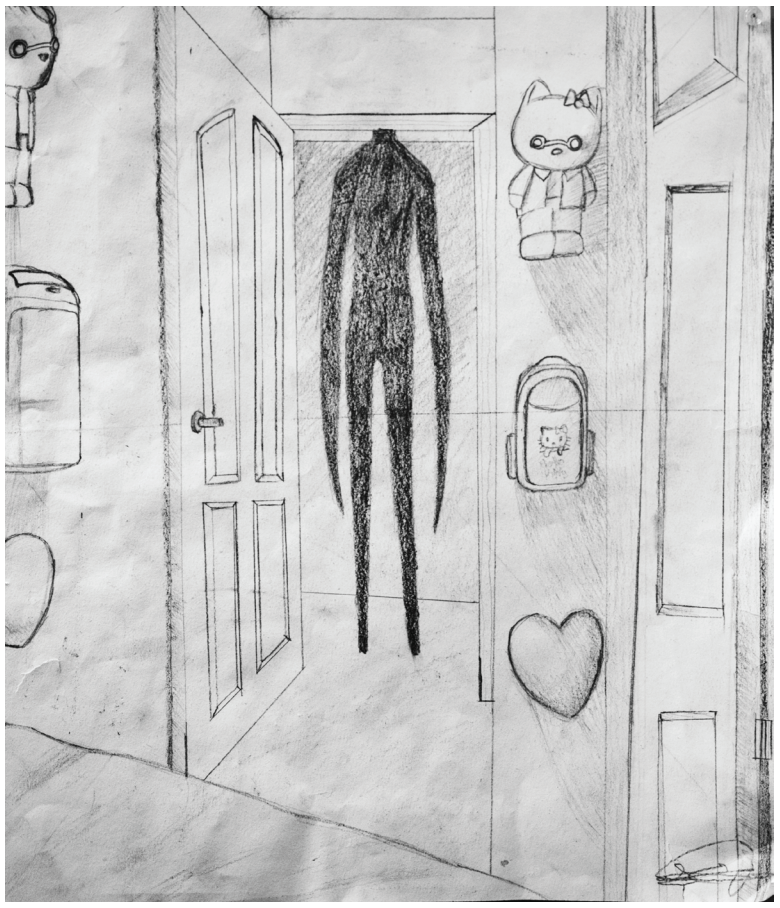
WHEN: MONDAYS 3:00- 6:00

WHERE: SNOD 103

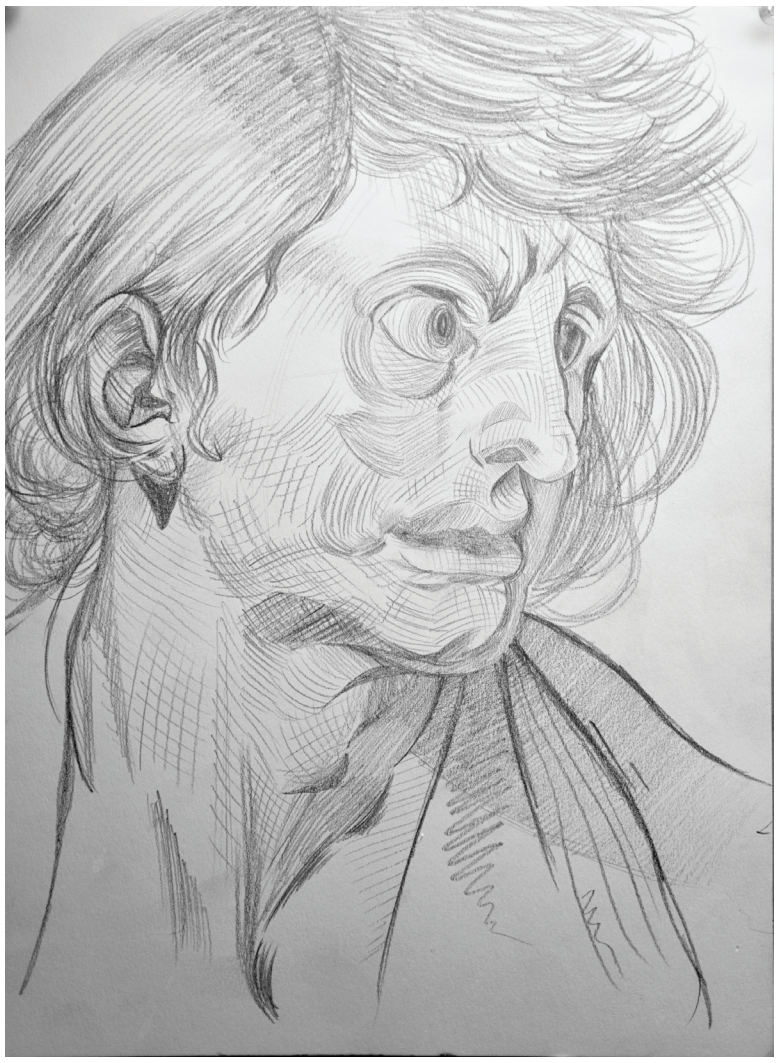
BIBLE CLUB

When: Wednesdays 8:30 - 10:00

Where: Rolled Gold Cafe



FROM THE STUDIO



Welcome to Ask Sophia, the Mat-Su Monitor's regular advice column. If you have a question you'd like to see answered, submit it anonymous at https://matsu.alaska.edu/monitor or in the Ask Sophia box in the FSM front lobby.

Ask Sophia

Dear Sophia, My grandmother recently moved up since she couldn't take care of herself. As it turns out she has dementia and favors her son the most. She constantly verbally abuses me and my mother and makes lies of us to my father. She is tearing my family apart. What do I do?

Dear Friend, I'm sorry you have to deal with this. You need to separate yourself from the person your grandma was and the person she is going to become. In other words, remember that you are not dealing with your grandmother anymore but do treat her with the same love and respect that you would your grandmother before she had dementia. She will act in ways that defy reason for any rational individual.

It is important to have regular meetings with family members to discuss what's working, what's not, etc. People in denial about it will realize others are seeing what they don't want to see. Some family may seem unable to accept that she is sick, and that they shouldn't treat her like a rational person anymore.

Unless it's harmful, going along with what she's understanding/imagining is what is best/easiest for everyone. She's only able to understand the world through the lenses of what she sees now. Arguing is only frustrating (and pointless) for everyone.

It's going to get harder. Never easier. You must allow yourself be okay with dissociating yourself from the pain. Otherwise it will eat you and your family up.

Dear Sophia, Can students take siblings to campus? What are the rules pertaining to taking siblings to campus when we have to juggle family obligations and being a University student?

Dear Friend, The campus is open to the public. Children of all ages visit campus. That said, according to the student handbook they cannot be brought regularly in lieu of childcare. They cannot be left unattended, cause disruption to others or be in high-risk areas like labs. They are not allowed in classrooms unless you have prior faculty approval.

Dear Sophia, When professors assign reading assignments regarding books... do we read it and take critical notes or do we scan the book and get the main idea?

Dear Friend, I suppose it depends on if you paid your tuition to learn or to just try and breeze through. If you want to get what you paid for you will have to make the effort. You get out of life what you put into it.

Generally speaking, it's a good idea to read every assignment your lecturer offers. By doing this, you will not only have a deeper comprehension of the content but also make sure that you are ready for class discussions and exams. Additionally, don't be afraid to ask your lecturer or a tutor for assistance if you need it or are having trouble understanding the reading.

See? If you read this whole answer you are wiser already.

LOGIC PUZZLE FOR YOU:

A farmer wants to cross a river and take with him a wolf, a goat and a cabbage. He has a boat, but it can only fit himself plus either the wolf, the goat or the cabbage. If the wolf and the goat are alone on one shore, the wolf will eat the goat. If the goat and the cabbage are alone on the shore, the goat will eat the cabbage. How can the farmer bring the wolf, the goat and the cabbage across the river without anything being eaten?

SUDOKU

Fill the grid with numbers so that each row, column and 3 x 3 section contains all of the digits 1 through 9.

	5		4	2	3			8
2			6	7	1	4	5	
4			5			2		
	1	8		3		6		
9	4						3	7
		3		4		9	8	
		5			4			9
	6	2	3	5	9			4
8			1	6	7		2	

KNOWLEDGE IS POWER

"In a jiffy" is a colloquial expression that means "quickly" or "a moment." However, in physics, jiffy is also a unit of measurement. A jiffy, which was first proposed by scientist Gilbert Newton Lewis, is the amount of time light takes to travel one centimeter.

CHRISTMAS YUMMM...

C	R	A	N	B	E	R	R	Y	M	A	H	G	R	J
A	O	P	E	P	P	E	R	M	I	N	T	N	O	U
N	C	C	O	O	K	I	E	S	S	T	T	I	A	I
N	A	N	O	Y	F	U	D	G	E	U	T	F	S	C
O	K	Y	V	A	P	O	P	C	O	R	N	F	T	A
L	E	A	S	F	I	U	S	I	H	K	M	U	B	N
I	R	M	Y	N	R	T	D	N	E	E	F	T	E	D
G	O	S	U	T	A	U	T	D	A	Y	E	S	E	Y
R	R	T	E	S	I	E	I	O	I	C	O	S	F	C
L	S	P	I	E	S	N	B	T	C	N	E	U	E	A
Y	U	L	E	L	O	G	I	N	C	S	G	P	G	N
S	E	O	T	A	T	O	P	V	E	A	I	T	G	E
C	H	A	R	C	U	T	E	R	I	E	K	B	N	S
G	I	N	G	E	R	B	R	E	A	D	R	E	O	I
S	E	T	A	L	O	C	O	H	C	O	N	G	G	S

Circle the words from the list below. Place the leftover letters in the spaces for a special message!

_ _ _ _

See *Gardner page 1*

pop up at any minute and they must be addressed." Lastly, but certainly not least, Dr Gardner tries to be out greeting and speaking with students and faculty and staff, in the hallway and knocking on doors. Which rolled into my next question of what she most enjoyed so far about her job? She replied, "Meeting the people. Everyone has been so welcoming and inviting."

After asking the new director what goals she had for herself and for the school, she gave me a bit of history on her previous education system experience in Kansas as a dean. She mentioned how the education systems between the two states had some differences but held some similarities too. She continued on to say that her big goal right now is to figure out our University system. That way when people bring forth concerns she knows the best ways to improve, the best decision to make and how to help with the issue. She said,'' There is a whole lot of learning about Mat-Su. What spaces do we have? What needs do we have? What's our budget?"

On a slightly different note I asked about some of the things she enjoyed doing in her past time. Some of her hobbies include candle making, paper crafts, and admiring the majestic mountains. During any break in the school year, you'll likely find her reading mystery books, specifically contemporary. Furthermore, she mentioned hiking was something she'd like to do in the summer.

To end, I inquired if there was anything she would like readers to know. She encourages everyone, especially students, to say hello. Her door is always open whether it be a stop in to say hello or schedule a meeting. She strives to be accessible to students to help them achieve their academic goals. She is truly a joy to talk with, and I likewise encourage students to stop by her office and give her a warm greeting. Or if you are out in the hallways give her a hello. I'm excited to see where the new director will take us.

See *Rockets page 3*

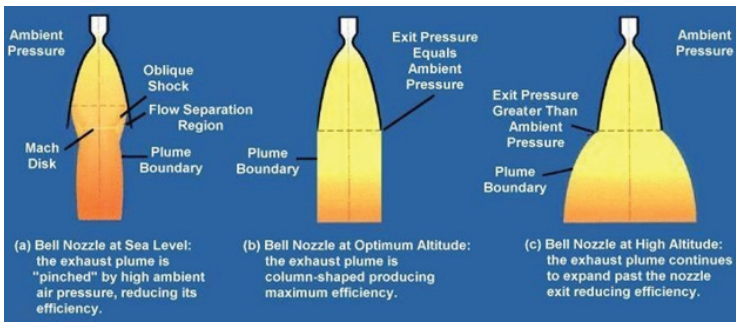

Ambient Pressure
Oblique Shock
Flow Separation Region
Mach Disk
Plume Boundary
Plume Boundary
Exit Pressure Equals Ambient Pressure
Exit Pressure Greater Than Ambient Pressure
Ambient Pressure
Plume Boundary
(a) Bell Nozzle at Sea Level: the exhaust plume is "pinched" by high ambient air pressure, reducing its efficiency.
(b) Bell Nozzle at Optimum Altitude: the exhaust plume is column-shaped producing maximum efficiency.
(c) Bell Nozzle at High Altitude: the exhaust plume continues to expand past the nozzle exit reducing efficiency.

Fig. 3: The Effects of Altitude on a Rocket's Exhaust Plume

atmosphere. This still allows for an engine to operate at a more realistic maximum performance instead of ideal. In space, this is much different as an engine nozzle would have to have its exhaust gasses exit with no pressure into the vacuum of space which is not achievable. Instead, another compromise is made where a rocket's nozzle is made as large as possible to maximize the effect of pressure on the engine within considerations of the engine's mass and the rocket's size.

The Ideal Rocket Equation and Equivalent Exhaust Velocity

When taking into account rocket performance, sometimes it is also best to know how fast it will travel in the time in which the engine is active. This applies specifically to when a rocket is in space where orbital velocities are dominant. For that, the ideal rocket equation is often a good way to get a very good estimate of a rocket's change in velocity. The equation can be used to relate a rocket's performance and differences in mass to get the overall change in velocity.

The equation in Fig. 4 looks a bit weird as the derivation of it requires a combination of physics and differential and integral calculus which is where the natural log, comes from, and stands for a rocket's initial mass and final mass respectively. Another term that appears a bit unusual in the equation is the term which stands for equivalent exhaust velocity or characteristic exhaust velocity. It comes from the division of a rocket's thrust by its mass flow rate. If the thrust and mass flow rate are known either from simulations, approximate calculations, or measured performance tests, then the equivalent exhaust velocity can be easily computed.

A Taste of Reality

What has been described so far is only the tip of the iceberg for rocket science. What has been presented so far has only been the Layman's terminology and a few equations when they are needed. The actual horror of what makes rocket science so hard is not necessarily the science, but trying to apply mathematical and physical models that explain science. When anyone begins to dig below the Layman's terminology to begin understanding rocket science, it can be overwhelming due to the number of subjects that have to be considered. The engineering that goes into rockets is perhaps one of the most complex fields out there that can turn concepts like rockets that can look simple on paper into massive monsters that look like a plumber's worst nightmare. However, for anyone that dares to understand the field beneath the Layman's terms, the best way to understand the field is to have a desire to learn it and a drive to keep on understanding the science even if it means being wrong about several ideas in the process of learning. If a person has both of these characteristics, then one of the most feared fields of science can be understood and harnessed by them.

$$\Delta v = v_{eq} \ln \frac{M_0}{M_F}$$

Fig. 4: The Rocket Equation

References

Green, W. (2011). *J-2X doghouse: the rocket equation! wahoo!*. National Aeronautics and Space Administration. https://blogs.nasa.gov/J2X/2011/03/21/post_1300716962948/

Hall, N. (May 13, 2021a). *Liquid rocket engine.* National Aeronautics and Space Administration. https://www.grc.nasa.gov/www/k-12/airplane/lrockth.html

Hall, N. (May 13, 2021b). *Nozzle design.* National Aeronautics and Space Administration. https://www.grc.nasa.gov/www/k-12/airplane/nozzled.html

Hall, N. (May 13, 2021c). *Rocket propulsion.* National Aeronautics and Space Administration. https://www.grc.nasa.gov/www/k-12/airplane/rocket.html

The Space Techie. (2020). *The shape of rocket exhaust*. https://www.thespacetechie.com/the-shape-of-rocket-exhaust/

Figure 1. ЮК. (2011, January.)Wikimedia Foundation. *Nozzle de Laval diagram*[Online Image]. Retrieved December 1, 2023 from https://commons.wikimedia.org/wiki/File:Nozzle_de_Laval_diagram.svg. No copyright

Figure 2. National Aeronautics and Space Administration. (2021, May). *Liquid Rocket Engine*[Online Image]. Retrieved December 1, 2023 from https://www.grc.nasa.gov/www/k-12/airplane/lrockth.html. Copyright 2021 by NASA. Reprinted with permission as per https://creativecommons.org/licenses/by-nc-nd/2.0/

Figure 3. The Space Techie. (n.d.). Rocket Exhaust Shapes[Online Image]. Retrieved December 1, 2023 from https://www.thespacetechie.com/the-shape-of-rocket-exhaust/. Unknown Copyright.

Figure 4. Green, W., National Aeronautics and Space Administration. (March 2011). Ideal Rocket Equation[Online Image]. Retrieved December 1, 2023 from https://blogs.nasa.gov/J2X/2011/03/21/post_1300716962948/. Copyright 2011 by NASA. Reprinted with permission as per https://creativecommons.org/licenses/by-nc/2.0/

GET INVOLVED WITH YOUR STUDENT NEWSPAPER!
Join the Mat-Su Monitor
JKB 108 or ZOOM
Wednesdays 12:00 to 1:15
contact uaa_mscmonitor@alaska.edu or
call (907) 745-9758

Spring 2024

Classes Begins January 16th

Enroll today at alaska.edu/uaonline

- **Close to Home**
- **Great Professors**
- **Engaged Student Body**
- **Supportive Staff/Advisors**

Mat-Su College
University of Alaska Anchorage

Check out our great programs - right here in the Valley!

Accounting, Computer Systems & Network Technology, General Business, Human Services, Paramedical Technology, Cisco Certified Network Associate, Veterinary Assisting, Certified Nurse Aide, Emergency Medical Technician, Nursing, and Refrigeration & Heating.

Opportunities Start Here!

907-745-9762 | www.matsu.alaska.edu

UA is an affirmative action/equal opportunity employer, educational institution and provider and prohibits illegal discrimination against any individual: www.alaska.edu/nondiscrimination.